
Tomcat SSL Certificate Deployment Guide

(generate CSR by customer)



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1. Generate the CSR by customer

1.1 Generate the private key files

Use following command to generate private key file: `Keytool -genkey -alias [keyEntry_name] -keyalg RSA -keystore [keystore_name] -keysize 2048`

```
[root@localhost local]# keytool -genkey -alias alias -keyalg RSA -keystore keystore -keysize 2048
Enter keystore password:
Re-enter new password:
What is your first and last name?
  [Unknown]: s.wosign.com
What is the name of your organizational unit?
  [Unknown]: WoSign CA Limited
What is the name of your organization?
  [Unknown]: support
What is the name of your City or Locality?
  [Unknown]: ShenZhen
What is the name of your State or Province?
  [Unknown]: GuangDong
What is the two-letter country code for this unit?
  [Unknown]: CN
Is CN=s.wosign.com, OU=WoSign CA Limited, O=support, L=ShenZhen, ST=GuangDong, C=CN correct?
  [no]: y

Enter key password for <alias>
  (RETURN if same as keystore password):
[root@localhost local]#
```

1.2 Generate CSR file

Use following command to generate CSR file: `Keytool -certreq -alias [keyEntry name] -file request.csr -keystore [keystore name]`

```
[root@localhost local]# keytool -certreq -alias alias -file csr.csr -keystore keystore
Enter keystore password:
[root@localhost local]# ls
```

1.3 Submit CSR file

When you apply the certificate on <https://buy.wosign.com/free/?lan=en>

You can choose 'Generated by myself' after you do the domain verification.


Choose option 2.

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Option 1:Generate CSR by the system

Option 2:Submit the CSR

 Please refer to: [SSL Certificate signing request\(CSR\) Generation Instructions](#)

Please paste Certificate Signing Request

Please notice:

- 1.System don't care the CSR content and signature algorithm except the key length that must be equal to or greater than 2048 bits;
- 2.No need to enter other information while you generate the CSR file.

2.Installation of SSL certificate

2.1 Get SSL certificate

You will get a zip file with password after you apply the certificate from wosign successfully. You need to enter the password to extract the file, after extract the file you will get 4 files: **for Apache、for IIS、for Nginx、for Other Server**. We will need unzip the zip file for other server and we can get following files.





 1_root.crt	← Root	2014/8/22 9:47
 2_cross.crt	← Cross root	2014/8/22 9:47
 3_issuer.crt	← Intermediate root	2014/8/22 9:47
 4_test.wosign.cn.crt	← Public key	2014/8/22 9:47

Figure 1

Import root, cross root, intermediate root and public certificate into keystore.

Following are command:

```
keytool -import -trustcacerts -alias [alias_name] -file xxx.cer -keystore [keystore_name]
```

[alias_name]: alias.

xx.cer: name of the root.

[keystore_name]: keystore

```
keytool -import -trustcacerts -alias root -file cross 1_root.crt -keystore keystore
```

```
keytool -import -trustcacerts -alias corss -file 2_cross.crt -keystore keystore
```

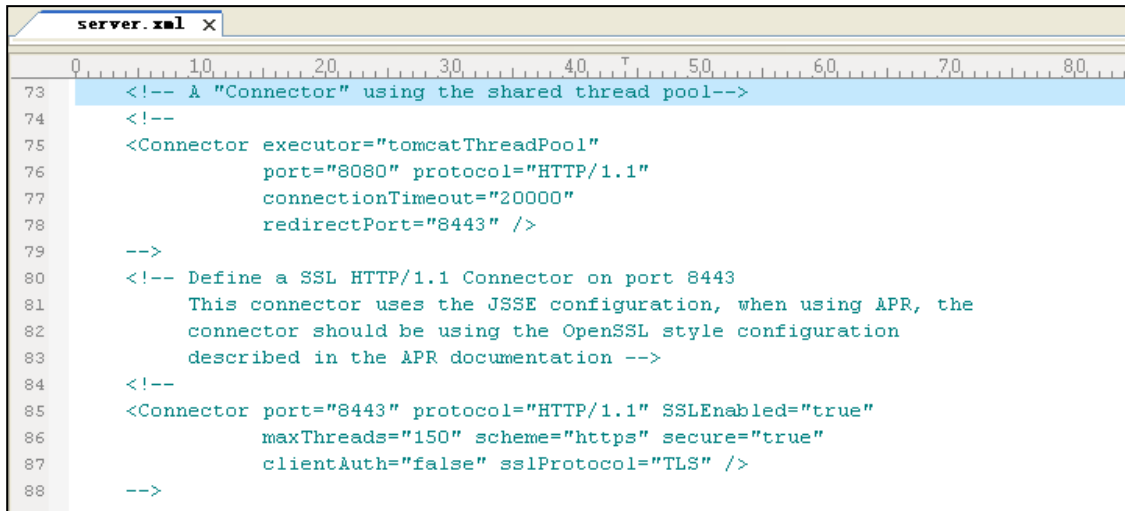
```
keytool -import -trustcacerts -alias issuer -file 3_issuer.crt -keystore keystore
```

Finally import public certificate.

```
Keytool -import -trustcacerts -alias [keyEntry_name] -file domain.com.crt -keystore keystore
```

2.2 Deploy SSL certificate

Find the file “Server.xml” in the Tomcat directory, which usually in conf file. Then open the file in a text editor, and then find the code shown as followed in figure 2



```
server.xml x
0 10 20 30 40 50 60 70 80
73 <!-- A "Connector" using the shared thread pool-->
74 <!--
75 <Connector executor="tomcatThreadPool"
76         port="8080" protocol="HTTP/1.1"
77         connectionTimeout="20000"
78         redirectPort="8443" />
79 -->
80 <!-- Define a SSL HTTP/1.1 Connector on port 8443
81     This connector uses the JSSE configuration, when using APR, the
82     connector should be using the OpenSSL style configuration
83     described in the APR documentation -->
84 <!--
85 <Connector port="8443" protocol="HTTP/1.1" SSLEnabled="true"
86         maxThreads="150" scheme="https" secure="true"
87         clientAuth="false" sslProtocol="TLS" />
88 -->
```

Figure 2

```
<Connector port="443" protocol="HTTP/1.1" SSLEnabled="true" maxThreads="150" scheme="https" secure="true"
clientAuth="false" sslProtocol="TLS" keystoreFile="path/to/keystore" keystorePass="password" />
```

Usually <Connector port="8443".....> is commented,we delete "<!-- -->",and edit it,like:port, keystoreFile,keystorePass. Figure 3.



```
<Connector port="443" protocol="org.apache.coyote.http11.Http11Protocol"
maxThreads="150" SSLEnabled="true" scheme="https" secure="true"
clientAuth="false" sslProtocol="TLS" KeystoreFile="conf/keystore" KeystorePass="password" />
```

Figure 3

Finally save the configuration file, and then restart the Tomcat and visit <https://domain.com>.

3.Install Secure signature

(Secure signature only works on OV and EV SSL certificate now)

If you want display the certificate logo on English website, add the code on the English web page below:

```
<SCRIPT LANGUAGE="JavaScript" TYPE="text/javascript" SRC="https://seal.wosign.com/tws-en.js"></SCRIPT>
```



A



B

4.Backup of SSL certificate

Please save the keystore file and password.

5.Restore of SSL certificate

Repeat 2.2 operation.